WHAT IS CLAIMED IS:

1. A network comprising:

a first node and a second node having at least one communication channel interconnecting the nodes, the first node and the second node each having at least one ingress rate restriction for data transfers from the respective node over the at least one communication channel, and at least one egress rate restriction for data transfers to the respective node on the at least one communication channel; and

a management node having communication channels with at least one of the plurality of nodes, the management node being operable to disallow at least a portion of a requested transmission from the first node to the second node when one of the ingress and egress rate restrictions of the first or second node is violated by the requested transmission.

2. The network according to claim 1, wherein the network is the Internet.

3. The network according to claim 1, wherein the first node and the second node are optical transport network nodes.

4. The network according to claim 1, wherein the at least one communication channel is a fiber optic link.

5. The network according to claim 1, wherein the at least one egress rate restriction includes a egress committed rate defining a minimum transfer rate reserved in the network for transfers to the respective node and an egress peak rate defining a maximum transfer rate allowable in the network for transfers to the respective node, and the at least one ingress rate restriction includes an ingress committed rate defining a minimum transfer rate reserved in the network for transfers from the respective node and an ingress peak rate defining a maximum transfer rate allowable in the network for transfers from the respective node.

6. The network according to claim 1, wherein the at least one communication channel is a point-to-point communication channel.

7. The network according to claim 1, wherein the at least one communication channel is a point-to-multipoint communication channel.

8. The network according to claim 1, wherein an allowed transmission from the first node to the second node includes either the requested transmission or a portion thereof the management node monitoring transmission from the first node to the second node.

9. A method of transmitting packet-switched data in a network having a plurality of nodes therein, the method comprising the steps of:

defining an ingress rate restriction for each of at least two nodes of the plurality of nodes, the ingress rate restriction limiting the amount of data that may be transmitted from the respective node on at least one channel of the network;

defining an egress rate restriction for each of the at least two nodes of the plurality of nodes, the egress rate restriction limiting the amount of data that may be transmitted to the respective node on the at least one channel of the network;

monitoring the amount of data transmitted from and to a first node; and

disallowing at least a portion of one of an attempted data transfer from and to the first node when one of the respective ingress rate restriction and egress rate restriction would be violated by the attempted data transfer.

10. The method according to claim 9, wherein the network is the Internet.

11. The method according to claim 9, wherein the at least two nodes are optical transport network nodes.

12. The method according to claim 9, wherein the at least one channel is a fiber optic link.

13. The method according to claim 9, wherein defining the at least one egress rate restriction further includes defining an egress committed rate that defines a minimum transfer rate reserved in the network for transfers to the respective node

from the plurality of nodes and defining an egress peak rate that defines a maximum transfer rate allowable in the network for transfers to the respective node from the plurality of nodes, and defining the at least one ingress rate restriction further includes defining an ingress committed rate that defines a minimum transfer rate reserved in the network for transfers from the respective node to the plurality of nodes and defining an ingress peak rate that defines a maximum transfer rate allowable in the network for transfers from the respective node to the plurality of nodes.

14. The method according to claim 9, wherein the at least one channel is a point-to-point communication channel terminated at respective ends by the at least two nodes.

15. The method according to claim 9, wherein the at least one channel is a point-to-multipoint communication channel.